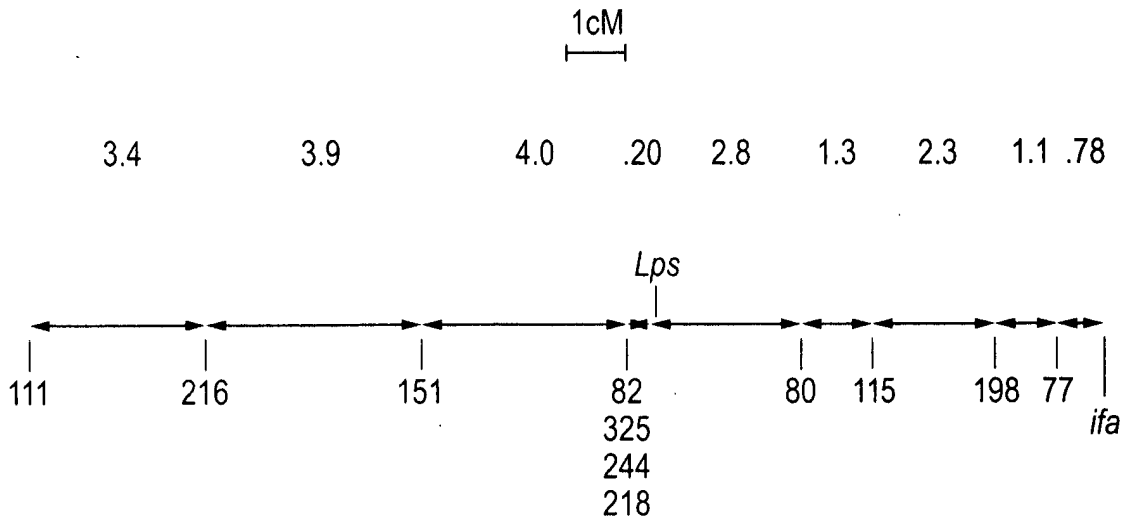

FIG. 1

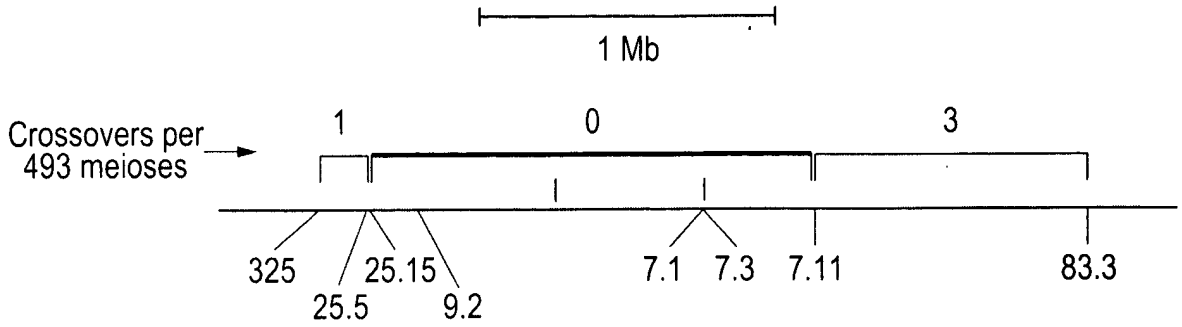
1 Mb
Crossovers per
493 meioses
1
0
3
325
25.5
25.15
9.2
7.1
7.3
7.11
83.3

FIG. 2A

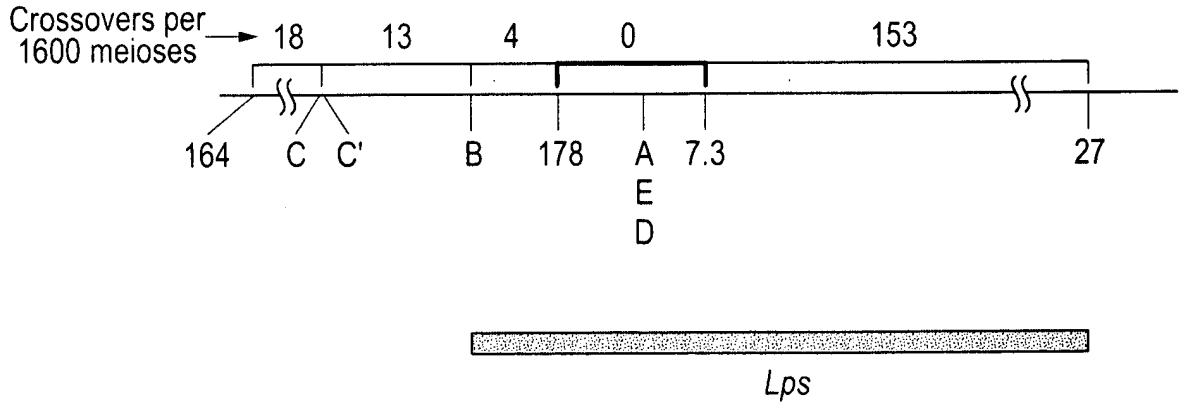
Crossovers per
1600 meioses
18
13
4
0
153
164
C
C'
B
178
A
E
D
7.3
27
Lps

FIG. 2B

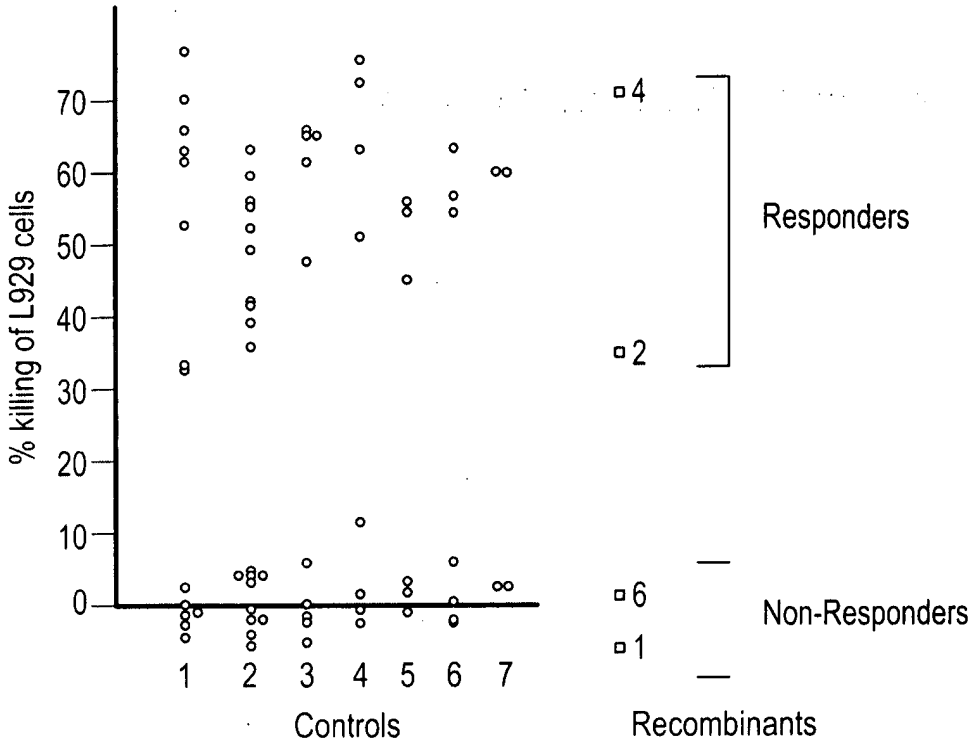
% killing of L929 cells
70
60
50
40
30
20
10
0
1
2
3
4
5
6
7
Controls
4
2
6
1
Recombinants
Responders
Non-Responders

FIG. 3A

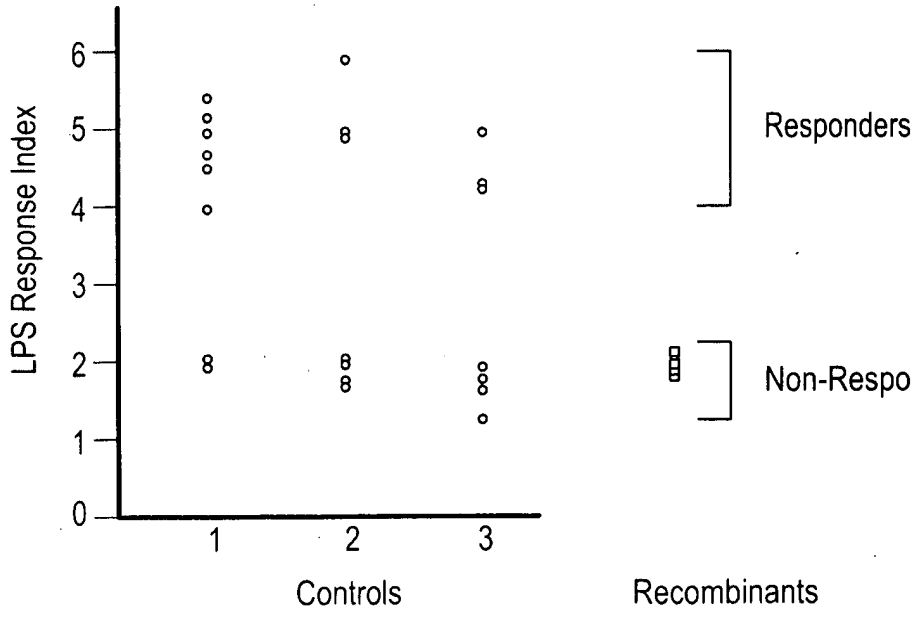
LPS Response Index
6
5
4
3
2
1
0
1
2
3
Controls
Recombinants
Responders
Non-Respo

FIG. 3B

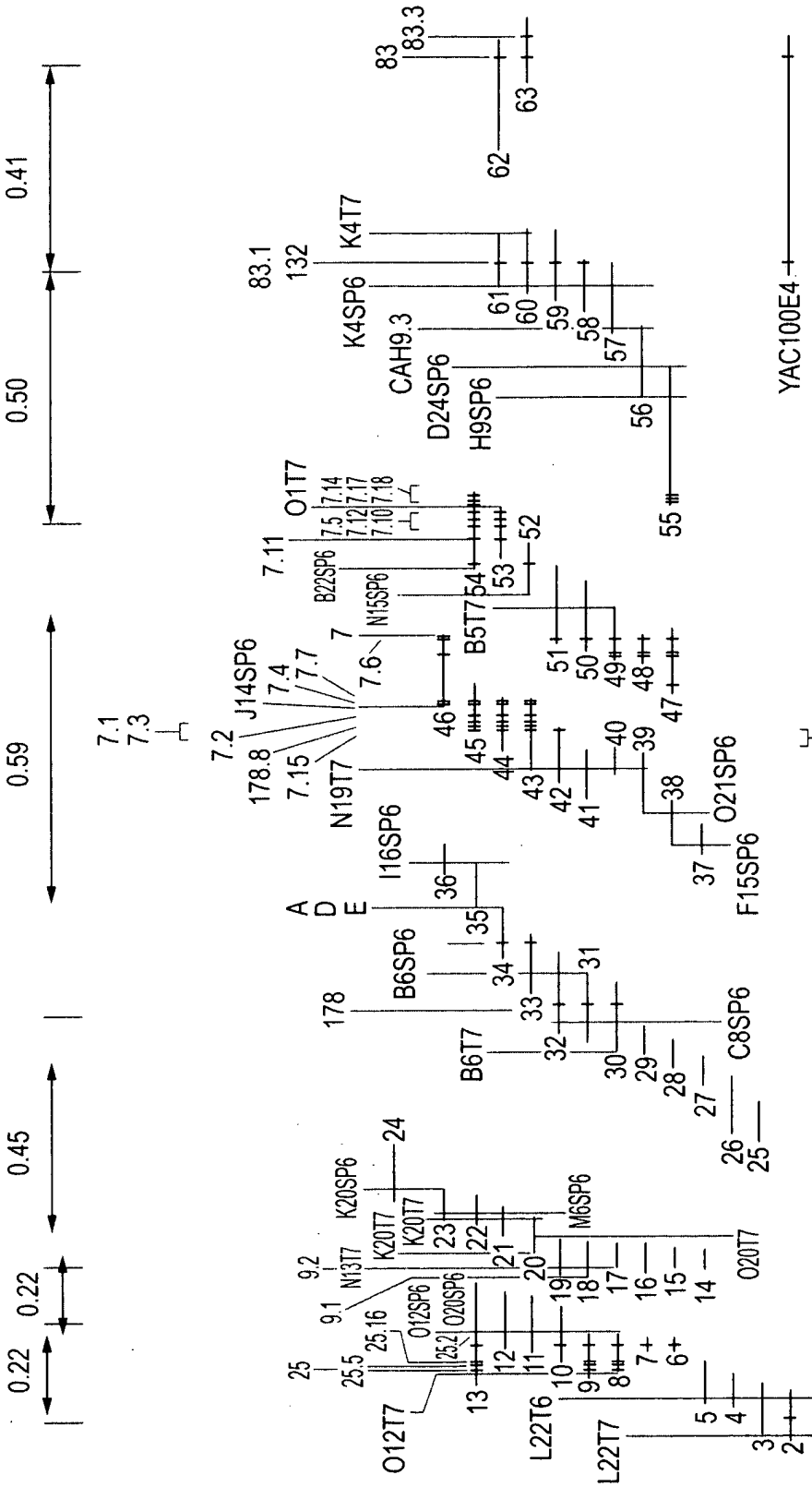
0.41
0.50
0.59
0.45
0.22
0.22
A
D
E
C
B
F
G
7.1
7.3
7.2
178.8
7.15
N19T7
J14SP6
7.4
7.7
7.6
7
N15SP6
B22SP6
7.11
O1T7
7.5
7.14
7.12
7.17
7.10
7.18
B5T7
54
52
53
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
O21SP6
F15SP6
I16SP6
36
35
178
B6SP6
34
33
32
31
30
29
28
27
26
25
B6T7
C8SP6
24
K20SP6
K20T7
23
22
21
20
M6SP6
O20T7
19
18
17
16
15
14
9.2
N13T7
9.1
25.16
O12SP6
25.2
O20SP6
25.5
25
12
11
10
9
8
7+
6+
5
4
3
2
1
13
O12T7
L22T6
L22T7
83
83.3
63
62
83.1
132
K4T7
K4SP6
61
60
59
58
57
CAH9.3
D24SP6
H9SP6
56
55
YAC100E4
7.1
7.3
7.11

FIG. 4A

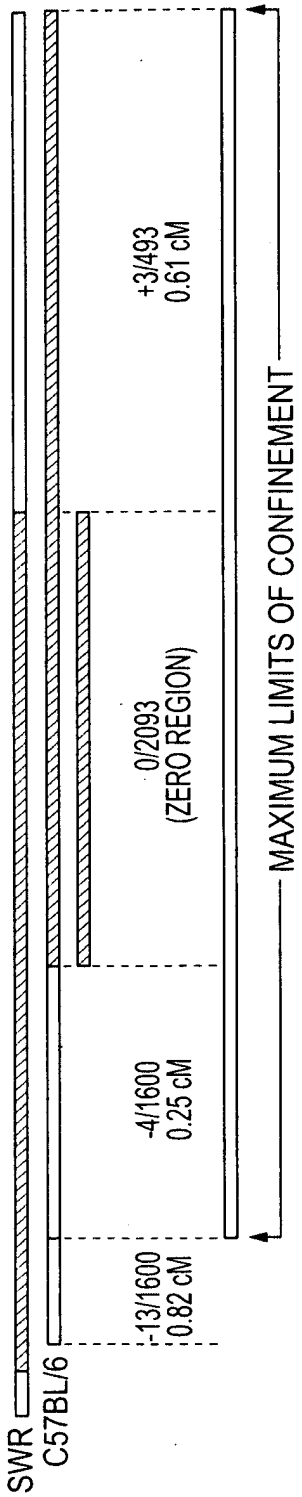
SWR
C57BL/6
-13/1600
0.82 cM
-4/1600
0.25 cM
0/2093
(ZERO REGION)
+3/493
0.61 cM
MAXIMUM LIMITS OF CONFINEMENT
1 Mb

FIG. 4B

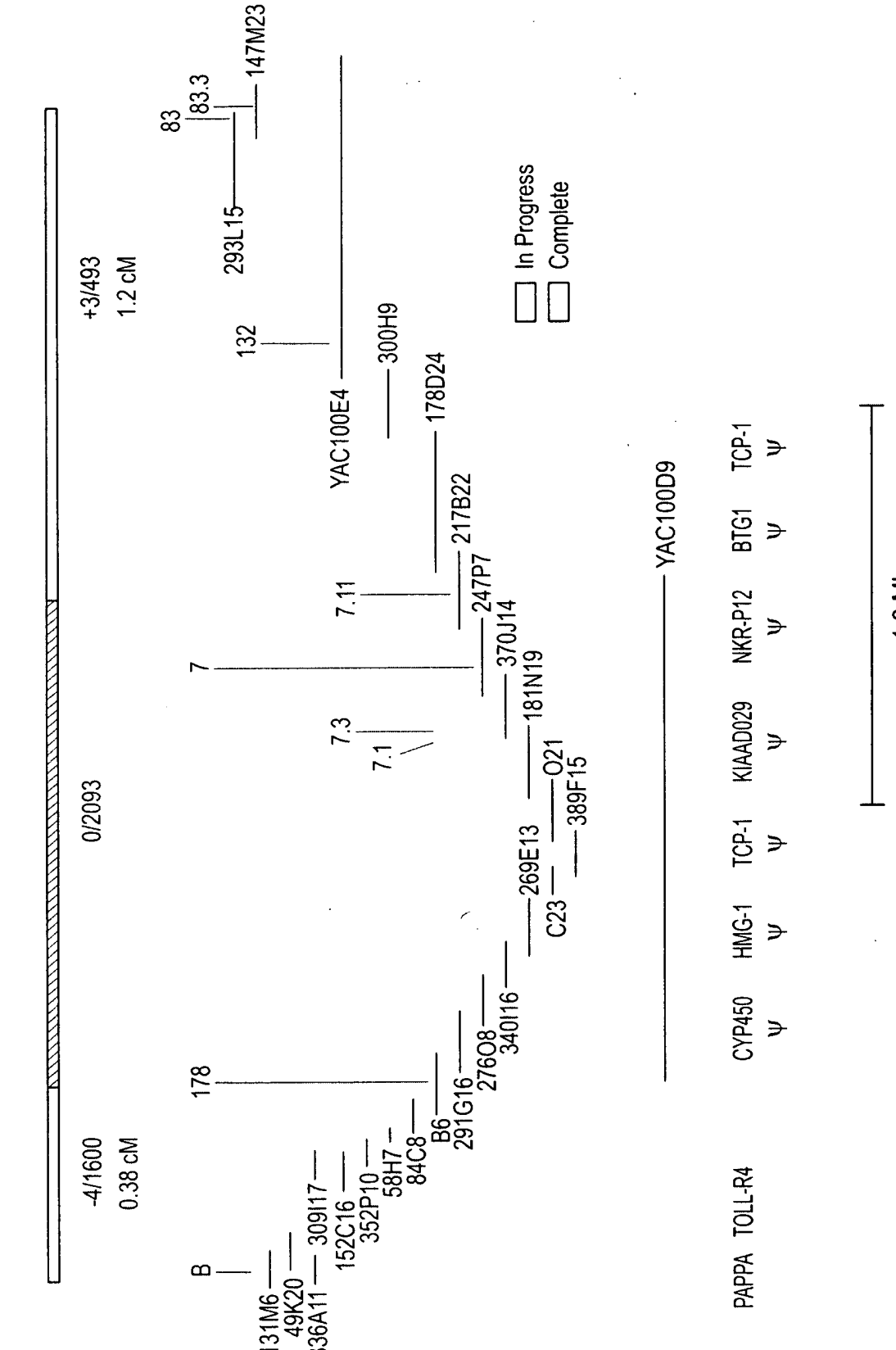
-4/1600
0.38 cM
0/2093
+3/493
1.2 cM
B
131M6
49K20
336A11
309I17
152C16
352P10
58H7
84C8
B6
291G16
276O8
340I16
269E13
C23
O21
389F15
181N19
370J14
247P7
217B22
178D24
7.3
7.1
7
7.11
178
YAC100E4
300H9
132
83
83.3
293L15
147M23
In Progress
Complete
YAC100D9
PAPPA
TOLL-R4
CYP450
HMG-1
TCP-1
KIAAD029
NKR-P12
BTG1
TCP-1
ψ
1.0 Mb

FIG. 5

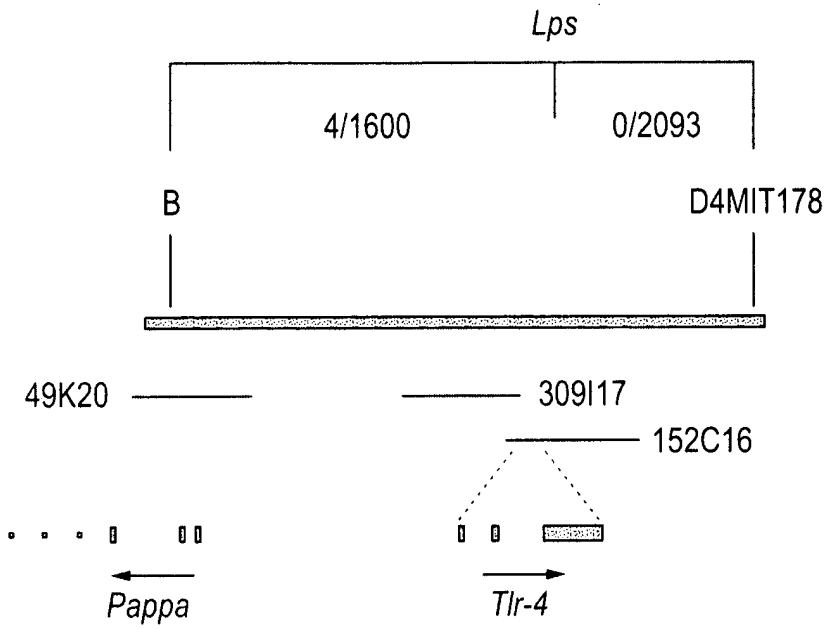

FIG. 6

```
          1                                                  50
  jtoll   MMPPWLLART LIMAL.FFSC LTPGSLNPCI EVVPNITYQC MDQKLSKVPD
  ntoll   MMPPWLLART LIMAL.FFSC LTPGSLNPCI EVVPNITYQC MDQKLSKVPD
rattlr4   MMPLLHLAGT LIMAL.FLSC LRPGSLNPCI EVLPNITYQC MDQKLSKIPH
humtlr4   MMSASRLAGT LIPAMAFLSC VRPESWEPCV EVVPNITYQC MELNFYKIPD
         51                                                 100
  jtoll   DTPSSTKNID LSFNPLKILK SYSFSNFSEL QWLDLSRCEI ETIEDKAWHG
  ntoll   DTPSSTKNID LSFNPLKILK SYSFSNFSEL QWLDLSRCEI ETIEDKAWHG
rattlr4   DIPYSTKNLD LSFNPLKILR SYSFTNFSQL QWLDLSRCEI ETIEDKAWHG
humtlr4   NLPFSTKNLD LSFNPLRHLG SYSFFSFPEL QVLDLSRCEI QTIEDGAYQS
        101                                                 150
  jtoll   LHHLSNLILT GNPIQSFSPG SFSGLTSLEN LVAVETKLAS LESFPIGQLI
  ntoll   LHHLSNLILT GNPIQSFSPG SFSGLTSLEN LVAVETKLAS LESFPIGQLI
rattlr4   LNQLSTLVLT GNPIKSFSPG SFSGLTNLEN LVAVETKMTS LEGFHIGQLI
humtlr4   LSHLSNLILT GNPIQSLALG AFSGLSSLQK LVAVETNLAS LENFPIGQLI
        151                                                 200
  jtoll   TLKKLNVAHN FIGSCKLPAY FSNLTNLVHV DLSYNYIQTI TVNDLQFLRE
  ntoll   TLKKLNVAHN FIGSCKLPAY FSNLTNLVHV DLSYNYIQTI TVNDLQFLRE
rattlr4   SLKKLNVAHN LIHSFKLPEY FSNLTNLEHV DLSYNYIQTI SVKDLQFLRE
humtlr4   TLKELNVAHN LIQSFKLPEY FSNLTNLEHL DLSSNKIQSI YCTDLRVLHQ
        201                                                 250
  jtoll   NPQVNLSLDM SLNPIDFIQD QAFQGIKLHE LTLRGNFNSS NIMKTCLQNL
  ntoll   NPQVNLSLDM SLNPIDFIQD QAFQGIKLHE LTLRGNFNSS NIMKTCLQNL
rattlr4   NPQVNLSLDL SLNPIDSIQA QAFQGIRLHE LTLRSNFNSS NVLKMCLQNM
humtlr4   MPLLNLSLDL SLNPMNFIQP GAFKEIRLHE LTLRNNFDSL NVMKTCIQGL
        251                                                 300
  jtoll   AGLHVHRLIL GEFKDERNLE IFEPSIMEGL CDVTIDEFRL TYTNDFSDDI
  ntoll   AGLHVHRLIL GEFKDERNLE IFEPSIMEGL CDVTIDEFRL TYTNDFSDDI
rattlr4   TGLHVHRLIL GEFKNERNLE SFDRSVMEGL CNVSIDEFRL TYINHFSDDI
humtlr4   AGLEVHRLVL GEFRNEGNLE KFDKSALEGL CNTLIEEFRL AYLDYYSDDI
        301                                                 350
  jtoll   VK.FHCLANV SAMSLAGVSI KYLEDVPKHF KWQSLSIIRC QLKQFPTLDL
  ntoll   VK.FHCLANV SAMSLAGVSI KYLEDVPKHF KWQSLSIIRC QLKQFPTLDL
rattlr4   YN.LNCLANI SAMSFTGVHI KHIADVPKHF KWQSLSIIRC HLKPFPKLSL
humtlr4   IDLFNCLTNV SSFSLVSVTI ERVKDFSYNF GWQHLELVNC KFGQFPTLKL
        351                                                 400
  jtoll   PFLKSLTLTM NKGSISFKKV ALPSLSYLDL SRNALSFSGC CSYSDLGTNS
  ntoll   PFLKSLTLTM NKGSISFKKV ALPSLSYLDL SRNALSFSGC CSYSDLGTNS
rattlr4   PLFKSWTLTT NREDISFGQL ALPSLRYLDL SRNAMSFRGC CSYSDFGTNN
humtlr4   KSLKRLTFTS NKGGNAFSEV DLPSLEFLDL SRNGLSFKGC CSQSDFGTTS
        401                                                 450
  jtoll   LRHLDLSFNG AIIMSANFMG LEELQHLDFQ HSTLKRVTEF SAFLSLEKLL
  ntoll   LRHLDLSFNG AIIMSANFMG LEELQHLDFQ HSTLKRVTEF SAFLSLEKLL
rattlr4   LKYLDLSFNG VILMSANFMG LEELEYLDFQ HSTLKKVTEF SVFLSLEKLL
humtlr4   LKYLDLSFNG VITMSSNFLG LEQLEHLDFQ HSNLKQMSEF SVFLSLRNLI
```

FIG. 7A

```
          451                                                       500
  jtoll   YLDISYTNTK IDFDGIFLGL TSLNTLKMAG NSFKDNTLSN VFANTTNLTF
  ntoll   YLDISYTNTK IDFDGIFLGL TSLNTLKMAG NSFKDNTLSN VFANTTNLTF
rattlr4   YLDISYTNTK IDFDGIFLGL ISLNTLKMAG NSFKDNTLSN VFTNTTNLTF
humtlr4   YLDISHTHTR VAFNGIFLGL SSLEVLKMAG NSFQENFLPD IFTELRNLTF
          501                                                       550
  jtoll   LDLSKCQLEQ ISWGVFDTLH RLQLLNMSHN NLLFLDSSHY NQLYSLSTLD
  ntoll   LDLSKCQLEQ ISWGVFDTLH RLQLLNMSHN NLLFLDSSHY NQLYSLSTLD
rattlr4   LDLSKCQLEQ ISRGVFDTLY RLQLLNMSHN NLLFLDPSHY KQLYSLRTLD
humtlr4   LDLSQCQLEQ LSPTAFNSLS SLQVLNMSHN NFFSLDTFPY KCLNSLQVLD
          551                                                       600
  jtoll   CSFNRIETS. KGILQHFPKS LAFENLTNNS VACICEHQKF LQWVKEQKQF
  ntoll   CSFNRIETS. KGILQHFPKS LAFENLTNNS VACICEHQKF LQWVKEQKQF
rattlr4   CSFNRIETS. KGILQHFPKS LAVFNLTNNS VACICEYQNF LQWVKDQKMF
humtlr4   CSFNRIETS. KQELQHFPKS LAFLNLTQND FACTCEHQSF LQWIKDQRQL
          601                                                       650
  jtoll   LVNVEQMTCA TPVEMNTSLV LDFNNSTCYM YKTIISVSVV SVIVVSTVAF
  ntoll   LVNVEQMTCA TPVEMNTSLV LDFNNSTCYM YKTIISVSVV SVIVVSTVAF
rattlr4   LVNVEQMKCA SPIDMKASLV LDFTNSTCYI YKTIISVSVV SVLVVATVAF
humtlr4   LVEVERMECA TPSDKQGMPV LSL.NITCQM NKTIIGVSVL SVLVVSVVAV
          651                                                       700
  jtoll   LIYHFYFHLI LIAGCKKYSR GESIYDAFVI YSSQNEDWVR NELVKNLEEG
  ntoll   LIYHFYFHLI LIAGCKKYSR GESIYDAFVI YSSQNEDWVR NELVKNLEEG
rattlr4   LIYHFYFHLI LIAGCKKYSR GESIYDAFVI YSSQNEDWVR NELVKNLEEG
humtlr4   LVYKFYFHLM LLAGCIKYGR GENIYDAFVI YSSQDEDWVR NELVKNLEEG
          701                                                       750
  jtoll   VPRFHLCLHY RDFIHGVAIA ANTIQEGFHK SRKVIVVVSR HFIQSRWCIF
  ntoll   VPRFHLCLHY RDFIHGVAIA ANTIQEGFHK SRKVIVVVSR HFIQSRWCIF
rattlr4   VPRFQLCLHY RDFIPGVAIA ANTIQEGFHK SRKVIVVVSR HFIQSRWCIF
humtlr4   VPPFQLCLHY RDFIPGVAIA ANTIHEGFHK SRKVIVVVSQ HFIQSRWCIF
          751                                                       800
  jtoll   EYEIAQTWQF LSSRSGIIFI VLEKVEKSLL RQQVELYRLL SRNTYLEWED
  ntoll   EYEIAQTWQF LSSRSGIIFI VLEKVEKSLL RQQVELYRLL SRNTYLEWED
rattlr4   EYEIAQTWQF LSSRSGIIFI VLEKVEKSLL RQQVELYRLL SRNTYLEWED
humtlr4   EYEIAQTWQF LSSRAGIIFI VLQKVEKTLL RQQVELYRLL SRNTYLEWED
          801                                                840
  jtoll   NPLGRHIFWR RLKNALLDGK ASNPEQTAEE EQETATWT~~
  ntoll   NPLGRHIFWR RLKNALLDGK ASNPEQTAEE EQETATWT~~
rattlr4   NALGRHIFWR RLKKALLDGK ALNPDETSEE EQEATTLT~~
humtlr4   SVLGRHIFWR RLRKALLDGK SWNPEGTVGT GCNWQEATSI
```

FIG. 7B

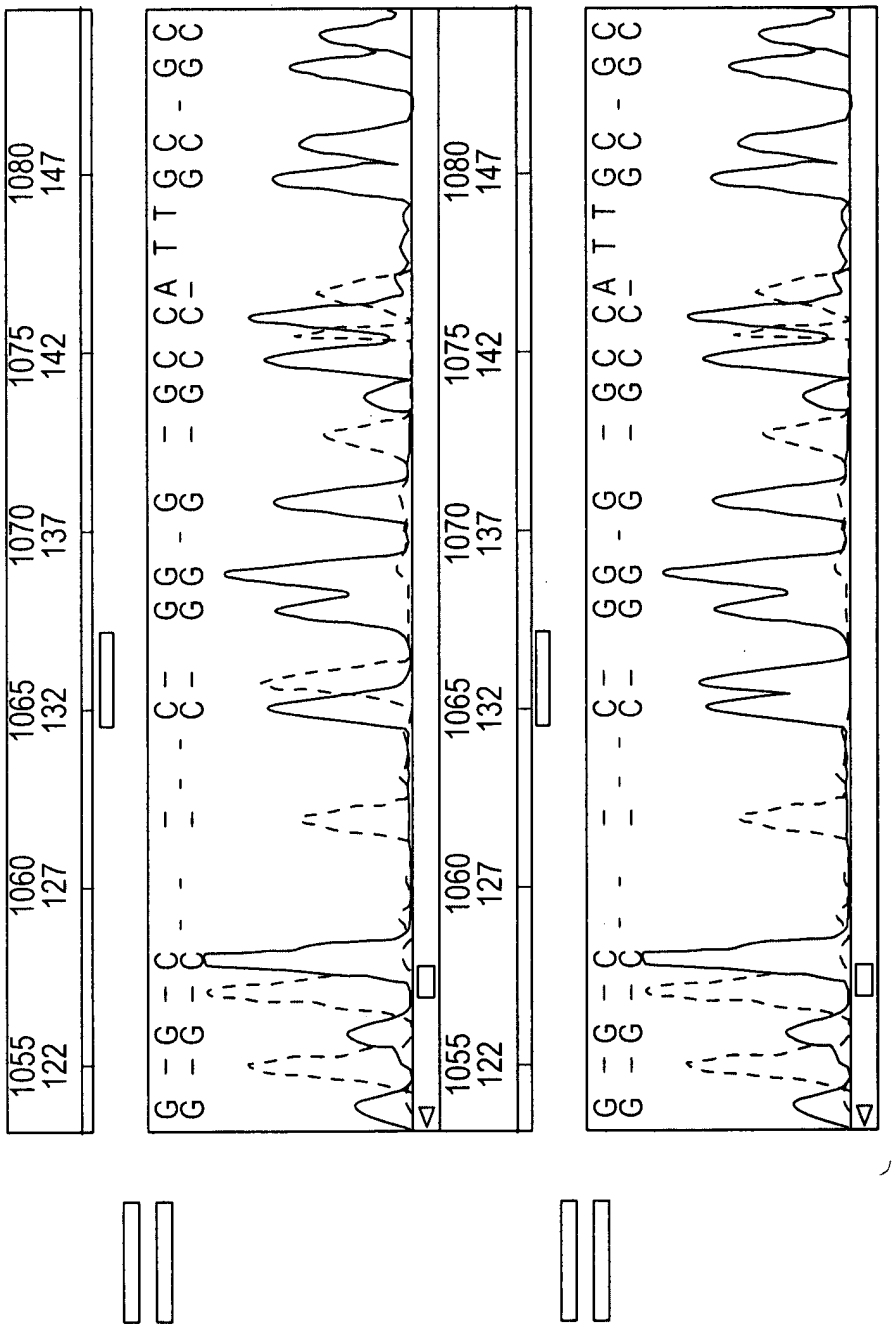

FIG. 7C

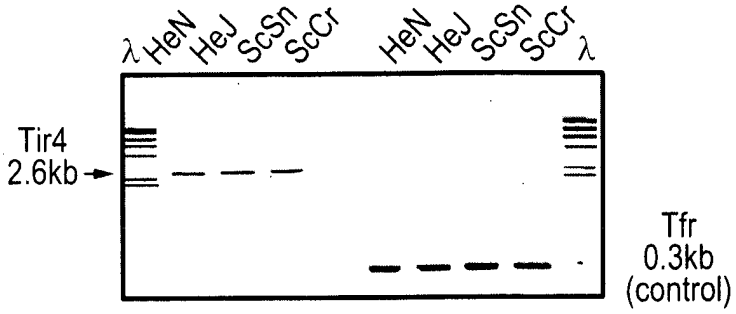
λ HeN HeJ ScSn ScCr HeN HeJ ScSn ScCr λ
Tir4
2.6kb
Tfr
0.3kb
(control)

FIG. 8A

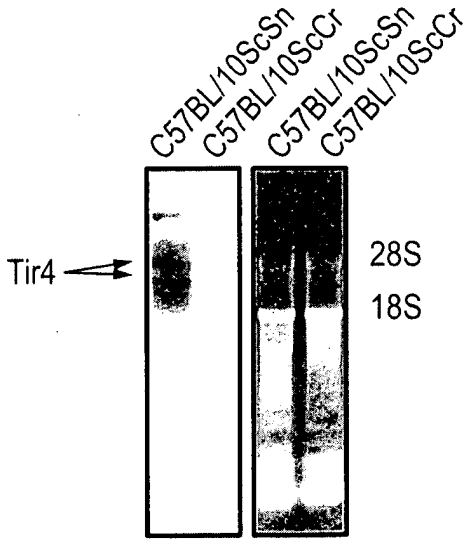
C57BL/10ScSn
C57BL/10ScCr
C57BL/10ScSn
C57BL/10ScCr
Tir4
28S
18S

FIG. 8B

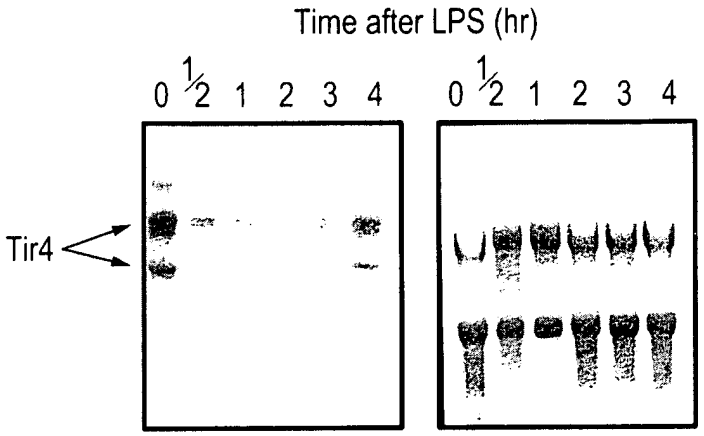

FIG. 9

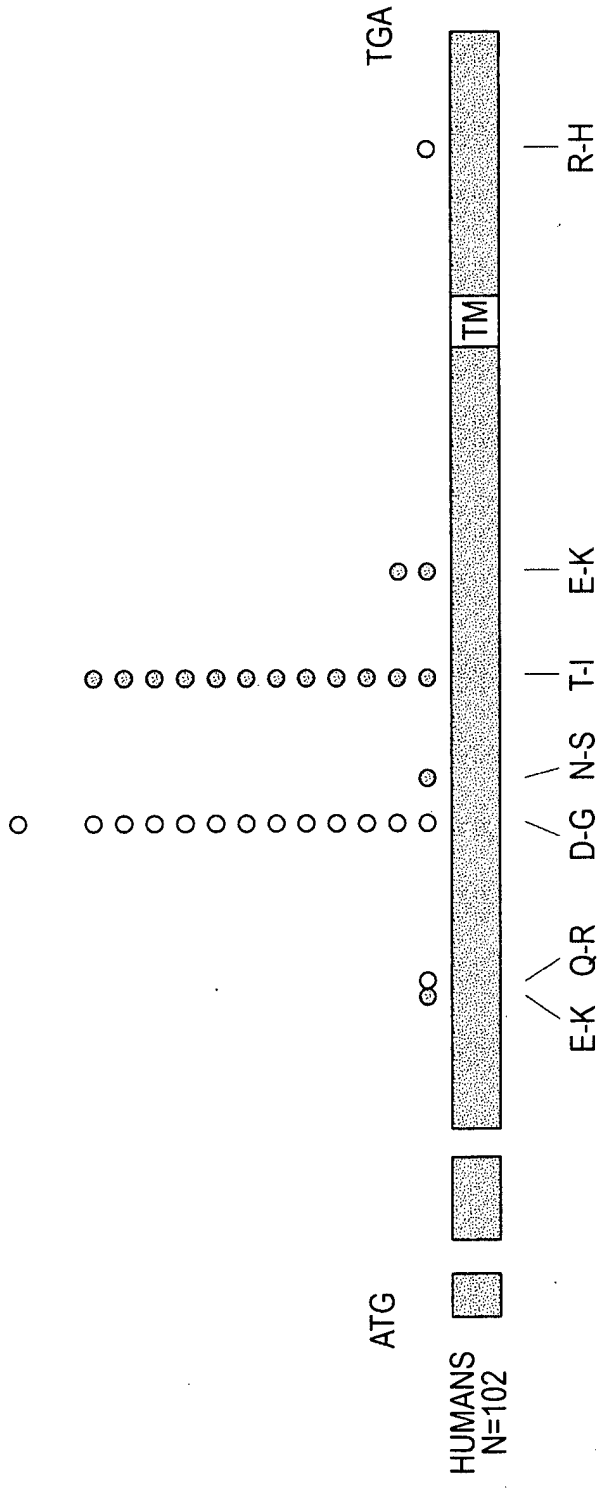

FIG. 10

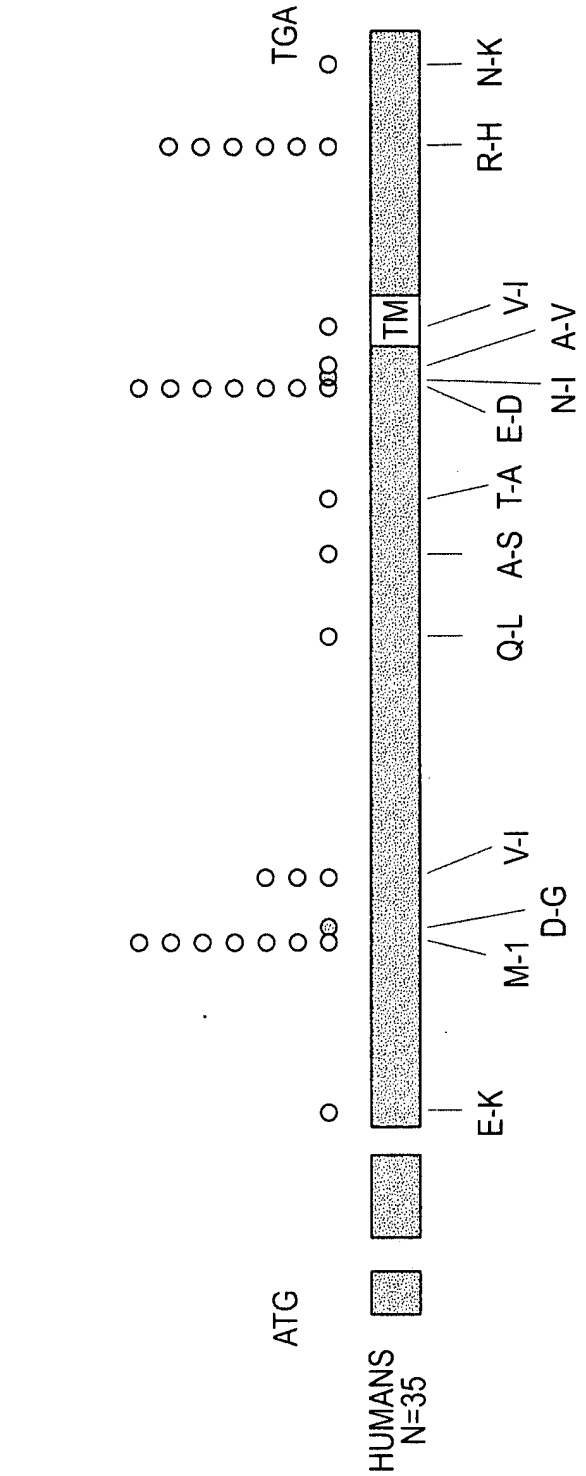

FIG. 11

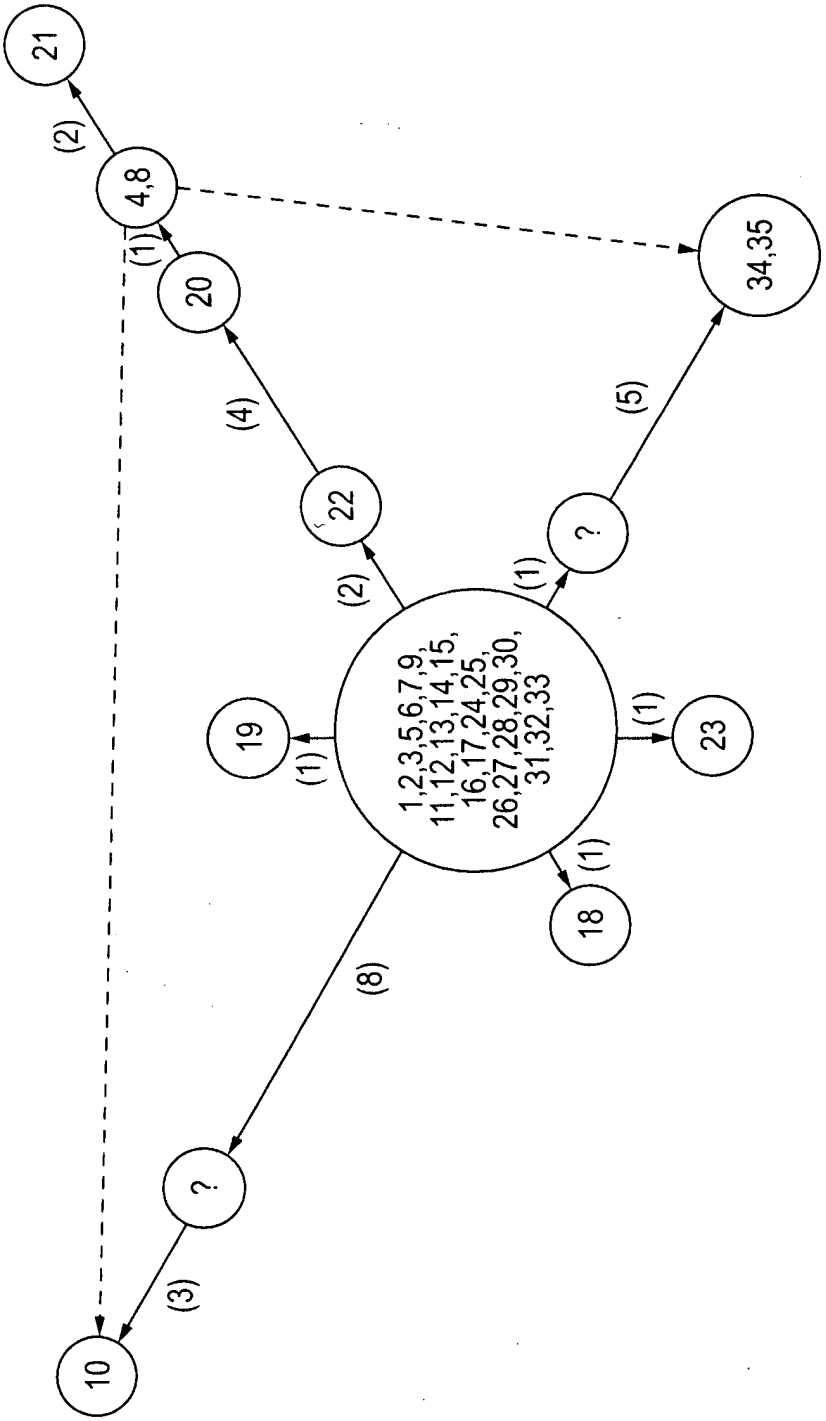
21
(2)
4,8
(1)
20
(4)
22
(2)
1,2,3,5,6,7,9,
11,12,13,14,15,
16,17,24,25,
26,27,28,29,30,
31,32,33
19
(1)
(1)
23
(1)
18
(8)
?
(3)
10
(1)
?
(5)
34,35

FIG. 12

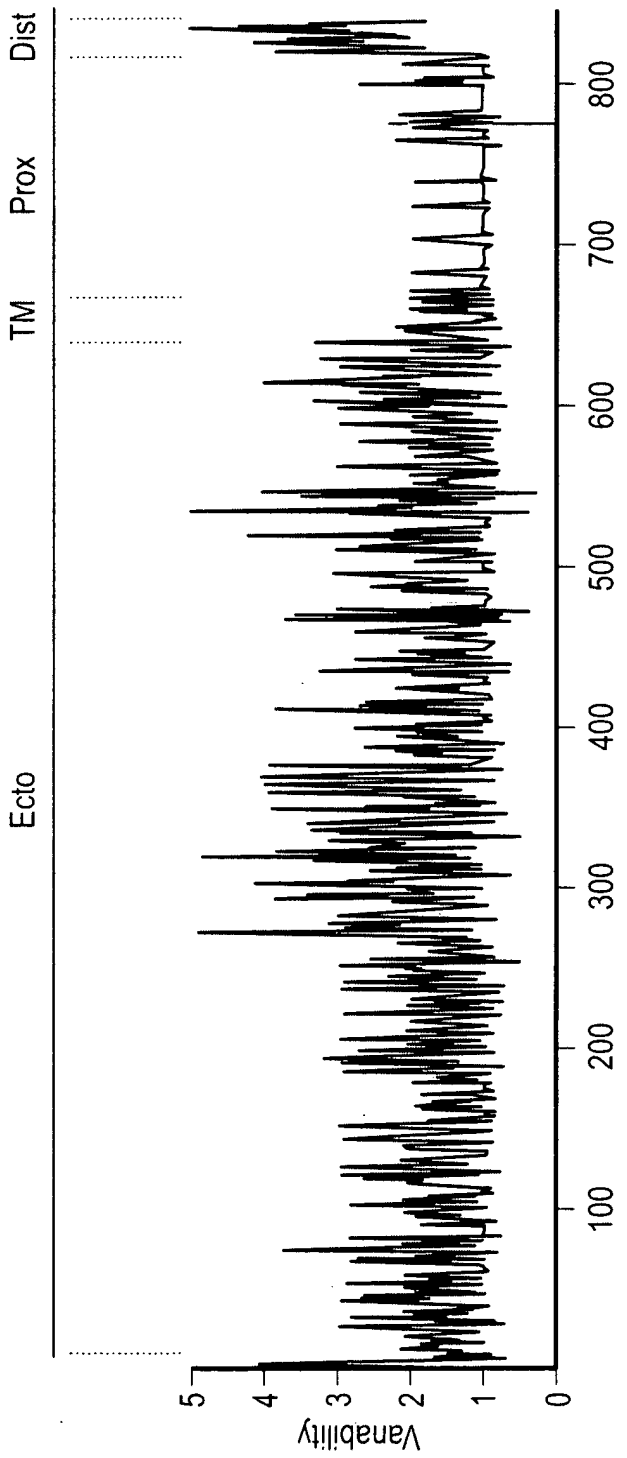
Ecto
TM
Prox
Dist
Variability
0
1
2
3
4
5
100
200
300
400
500
600
700
800
TLR4 Residue

FIG. 13

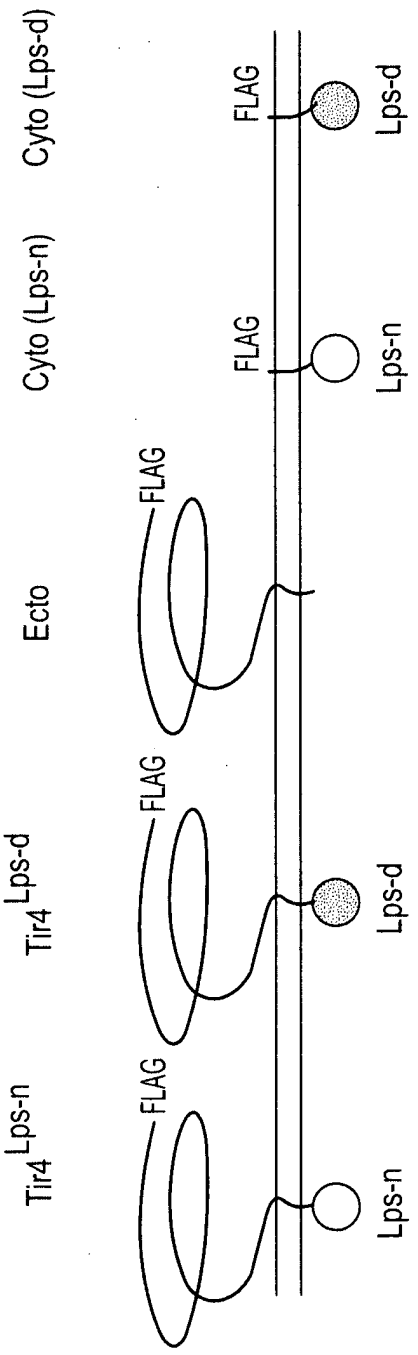
Tlr4Lps-n
Tlr4Lps-d
Ecto
Cyto (Lps-n)
Cyto (Lps-d)
FLAG
FLAG
FLAG
FLAG
FLAG
FLAG
Lps-n
Lps-d
Lps-d
Lps-n
Lps-d
Lps-n

FIG. 14

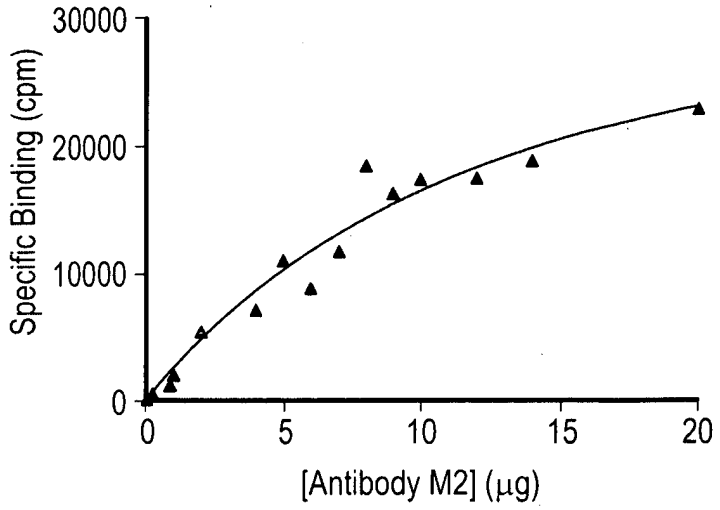

FIG. 15A

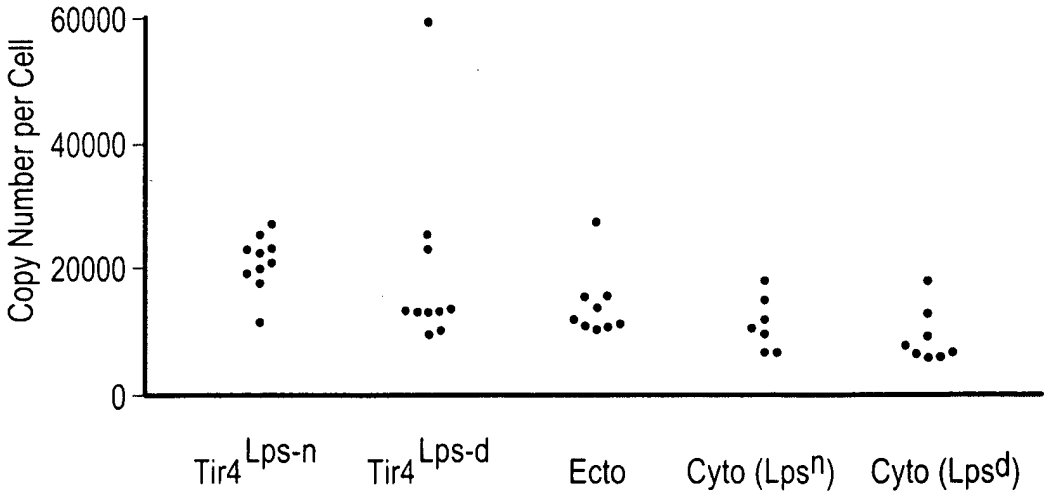

FIG. 15B

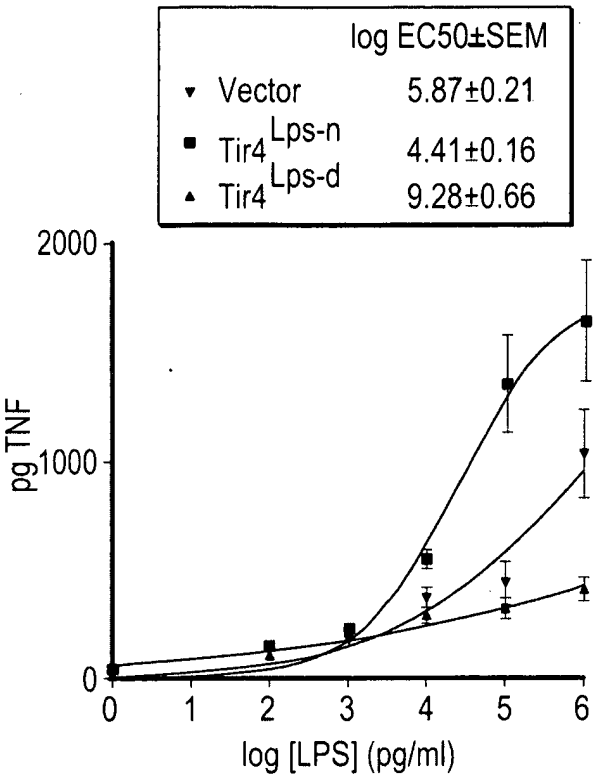

FIG. 15C

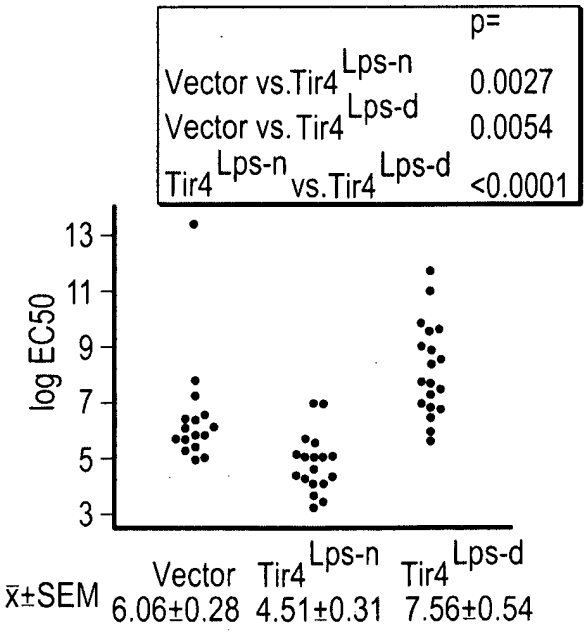

FIG. 15D

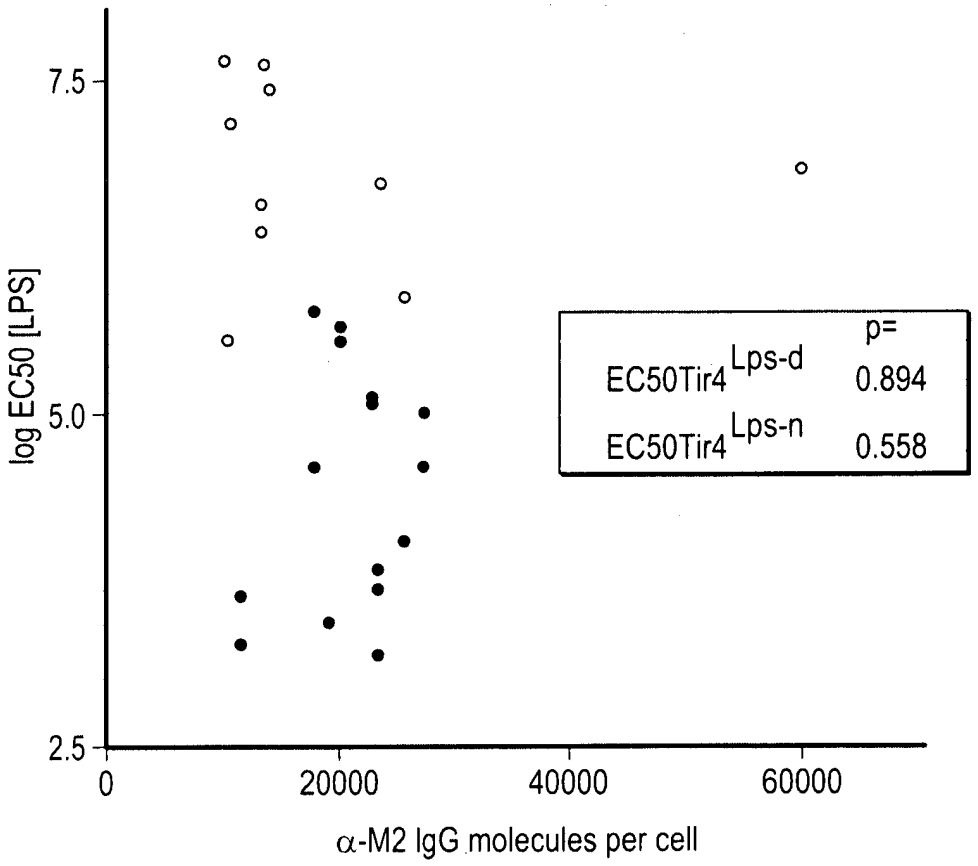
7.5
5.0
2.5
log EC50 [LPS]
0
20000
40000
60000
α-M2 IgG molecules per cell
p=
EC50Tir4Lps-d 0.894
EC50Tir4Lps-n 0.558

FIG. 15E

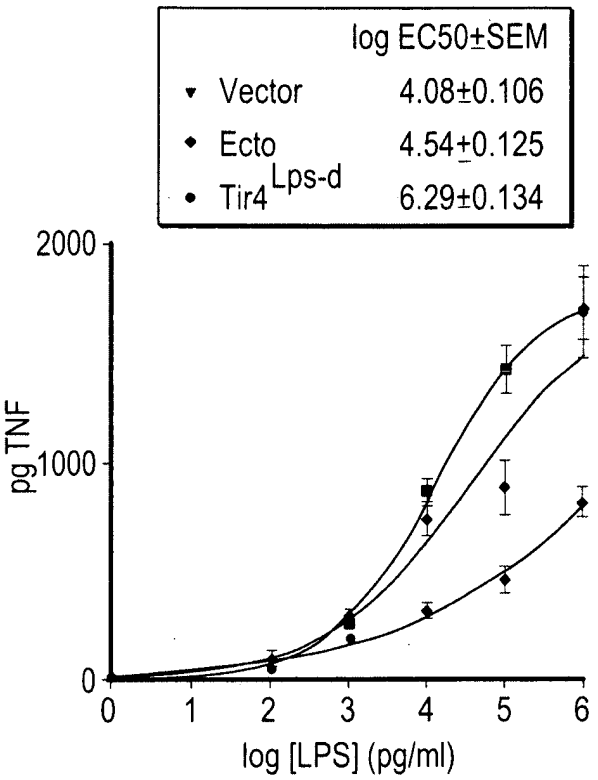

FIG. 16A

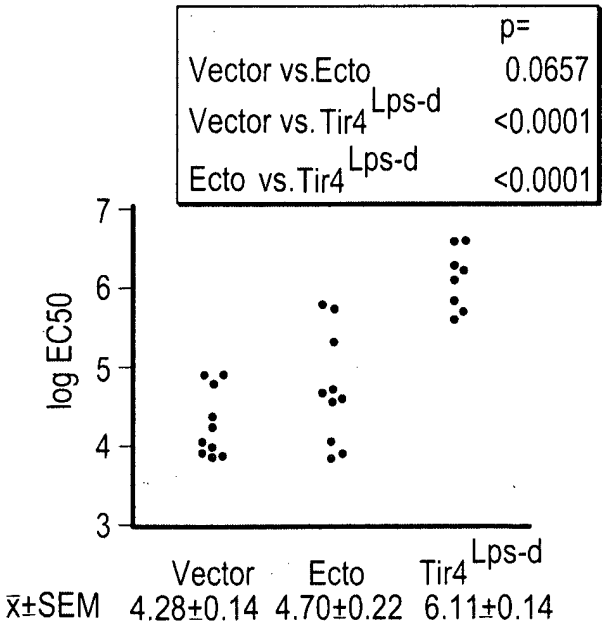

FIG. 16B

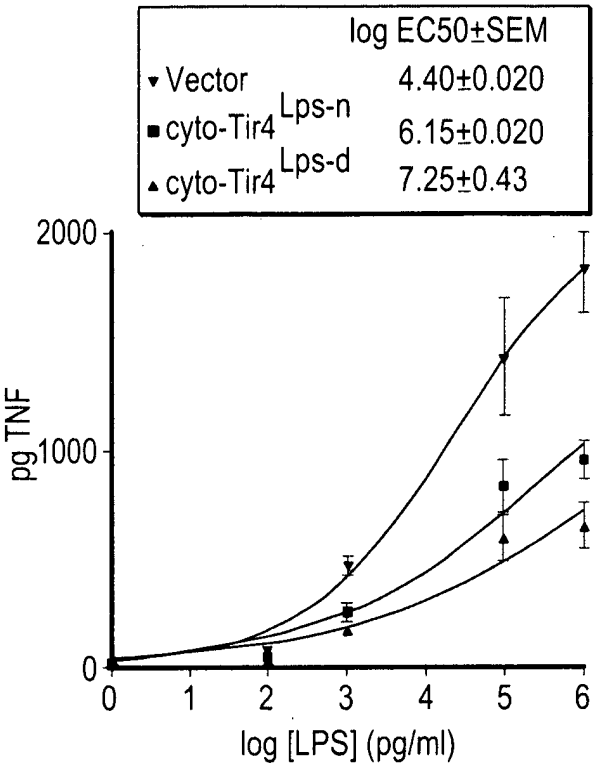

FIG. 17A

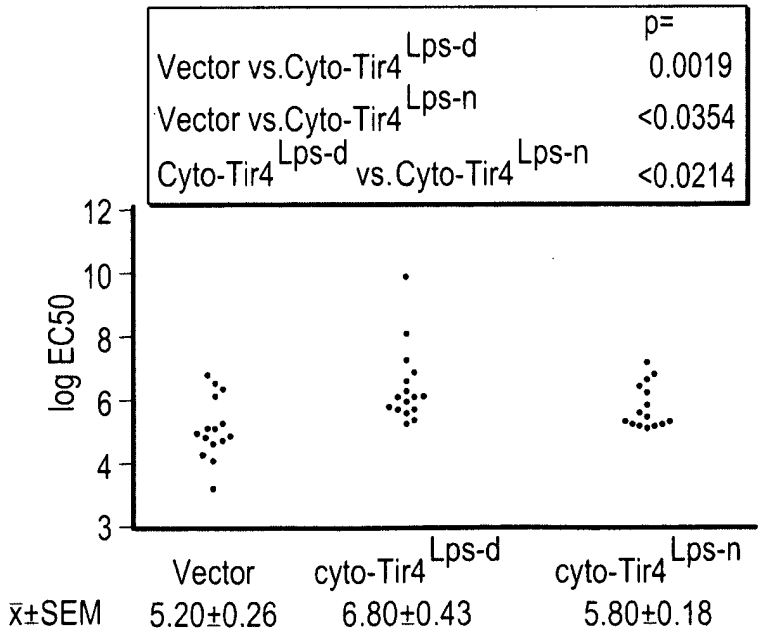

FIG. 17B